

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please cancel claims 1-32 without prejudice.

Claims 1-32 (canceled)

Please add following new claims 33-39:

33. (New) A circuit, comprising:

a power switch coupled between a first terminal and a second terminal, the first terminal to be coupled to an energy transfer element of a power supply and the second terminal to be coupled to a supply rail of the power supply;

a drive signal generator circuit coupled to a third terminal to receive an input signal, the drive signal generator to generate a drive signal coupled to control switching of the power switch in response to the input signal to regulate the output of the power supply; and

a current limit circuit coupled to the power switch and the drive signal generator circuit to control the drive signal to limit a current flow through the power switch, the current limit circuit including a state machine having a plurality of states and adapted to send signals to current limit adjustment circuitry included in the current limit circuit to adjust a plurality of current limit settings for the power switch in response to the input signal.

34. (New) The circuit of claim 33 wherein the input signal is a feedback signal representative of an output of the power supply.

35. (New) The circuit of claim 33 wherein the input signal is a feedback signal representative of an output voltage of the power supply.

36. (New) The circuit of claim 33 wherein the input signal is a feedback signal representative of an output current of the power supply.

37. (New) The circuit of claim 33 wherein the drive signal generator circuit is adapted to selectively disable each on period of the drive signal in response to the input signal to regulate the output of the power supply.

38. (New) The circuit of claim 33 wherein the plurality of current limit settings to which the power switch is adjusted are selected in a first order by the state machine when transitioning from a low state to a super high state and wherein the plurality of current limit settings to which the power switch is adjusted are selected in a second order by the state machine when transitioning from the super high state to the low state.

39. (New) The circuit of claim 38 wherein the second order in which the plurality of current limit settings are selected by the state machine is different than a reversal of the first order in which the plurality of current limit settings are selected by the state machine.